



RESEARCH ARTICLE

ANALYSIS ON RETURNS TO LEVELS OF EDUCATION AND CHALLENGES FACED BY THE
COMPUTER URBAN SELF EMPLOYED IN KISII COUNTY, KENYA

*Eliud Nyakundi, Prof. Enose M.W. Simatwa and Prof Theodore M. O. Ayodo

Department of Educational Management and Foundation, Maseno University, Kenya

ARTICLE INFO

Article History:

Received 12th May, 2017
Received in revised form
18th June, 2017
Accepted 24th July, 2017
Published online 31st August, 2017

Key words:

Analysis,
Education,
Returns.

*Corresponding author:

Eliud Nyakundi,
Department of Educational Management
and Foundation, Maseno University,
Kenya

ABSTRACT

The self-employment sector provides an avenue for workers to earn a living. There exists earning differentials among workers with various levels of education worldwide. In Kisii County there are worker entering into employment with various levels of education. The return to the self-employed varies. The return to the self-employed is important in determining individual and government investment in education. The purpose of the study was to establish education returns to computer self-employment activities in urban Kisii County. The study objectives were to; determine the returns to education of various levels of education of the self-employed in computer industry, determine the challenges facing the self-employed, determine effectiveness of intervention measures by Kenya government to assist the self-employed in their work. The study used descriptive and correlation design. Human capital theory was used. The population of the study was 11240. That is in computer service industry 6400. The study used Fisher's model to derive a sample of 384 respondents with 218 computer services Questionnaire and interview schedules were used to collect data for the study. Quantitative data was analyzed using descriptive statistics and regression analysis. Qualitative data was transcribed and analyzed in emergent themes and sub-themes. The study found out that; in computer service industry self-employed respondents with K.C.P.E earned an average Ksh 15,571.17, K.C.S.E earned an average 14,857.08, certificate earned 9364.81 and diploma earned an average of 9364.81 amount of money and bachelor earned 30,293.33. The Pearson's r results were' k.c.pe 0.643, k.c.s.e 0.104, certificate 0.128, diploma 0.195 and bachelors degree 0.045. The r^2 analysis was: k.c.pe category the r^2 was 0.0413, k.c.s.e was 0.011, certificate 0.016, and diploma was 0.038 for bachelors. The adjusted R results were:kcpe 0.373, kcse 0.02, certificate 0.002, diploma 0.001 and bachelors 0.075. The ANOVA indicated k.c.p.e (F(1,15)10.572,P=0.005), k.c.s.e was (F(1,70)0.761, P=0.386), certificate was (F(1,52)0.868,P=0.356), diploma was (F(1,28)1.031, P=0.319 and bachelor results were (F(1,13)0.006,P=0.874). Government intervention was not effective in the provision of: market stalls, loans and market for finished products, but effective in provision of: security, electricity and infrastructure. The study concluded that; there was a significant and positive association between returns to education and increasing level of education, and lack of capital was a challenge to the self-employed. The study recommended government intervention in funding the self-employed in their activities, reduced electricity charges and blackouts. The study is important in formulation of education programmes relevant to the self-employed and government intervention in support of the self-employed.

Copyright©2017, Eliud Nyakundi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Eliud Nyakundi, Dr. Enose M.W. Simatwa and Prof Theodore M. O. Ayodo, 2017. "Analysis on returns to levels of education and challenges faced by the computer urban self employed in Kisii county, Kenya", *International Journal of Current Research*, 9, (08), 56215-56221.

INTRODUCTION

The theory of human capital was extensively developed by Becker and Shultz (Shultz, 1961; Becker, 1962 and Mincer, 1974). The theory advances the view that expenditure in education and training is undertaken with a view to increase personal income. Education is assumed to equip recipients with skills and experience that increases their productivity

*Corresponding author: Eliud Nyakundi,

Department of Educational Management and Foundation, Maseno University, Kenya.

which is rewarded by returns in terms of earnings. You, and Giseung (2008) observed that; the returns of investment in education can be calculated from the earnings of the recipients of education. Psacharopoulos and Patrinos (2004) found out that the returns to schooling in developing countries are higher than in developed countries. Schultz (2004), Kingdon et al. (2008), show that in general the return to an extra year of education increases with the level of education; while returns do not increase monotonically with level of education in some countries. Education is also associated with other benefits. Gavan and Pietro, (2011) observed that there are a number of

other benefits associated with higher education qualification attainment; such as improved health outcomes and the reduced likelihood of requiring public sector assistance in relation to healthcare or the negative relationship between qualification attainment and criminal activity. There is also some economic literature on the existence of education-related spillovers, whereby the labour market outcomes of those with lower levels of qualification attainment is augmented by the presence of a greater proportion of more highly qualified workers. Card (1999) avers that optimal schooling level equates the marginal rate of return to additional schooling. Additional schooling is assumed to translate into more earnings. Investment in human capital is considered a crucial factor that contributes to economic growth (Idrus and Cameron, 2000). Returns to education have a significant impact in individual earnings. Returns to education in the formal sector can be measured from earnings accruing from monthly wages (Psacharopoulos, 2004, and Soon, 1987). Results from the relationship between education and earnings in self-employment have mixed findings. The mixed findings arise from the nature of self-employment activities which have no wage structure and are subject to different earnings dependent on varied working variables (You and Giseung, 2008, Donald 2002). Samir and Barry (2013) found little evidence of human capital effects in the earnings determination process in the self-employment sector in Tanzania. Donald (2002) observed that the role of human capital acquisition, particularly educational attainment, is less clear-cut for the self-employed. Evidence on the relationship between educational background on the other hand and entry to and success in self-employment on the other hand is complex and mixed. Meagre and Martin (2011) observed that the relationship also varies between occupation and sectors.

Bowles, Gintis and Osborn (2001) propose alternative view that education gives an indication of whether potential employees match the employee's incentives-enhancing preference, traits that assists in exercise of employees authority. In the self-employment sector there exists no clear cut structure determining earning differentials. Even analysis of earnings in specific self-employment has hardly been examined. Carlos and Herman (2011) did not find clear reasons on the role of education on earnings. Collins (1979) suggested that there was no productivity arguments involved as education was just used as a legitimized means for social closure and exclusion. Through various report and sessional paper the Government of Kenya has emphasized the link between education and self-employment sector. The reports of (1976 and 1988) had recommended link between education sector and self-employment in terms of skill endowment. The Sessional Paper No 1 of 1986 on Economic management for renewed growth, Sessional Paper No 2 of 1982 on small enterprise and Jua kali development in Kenya, and Sessional Paper No 2 of 1996 on industrial transformation to year 2020 consider Kenya's informal sector as a means of economic development and employment creation. Kenya's sixth development plan (1989-1993) integrated new employment creation in the informal sector. Sessional Paper No 2 of 1996 on industrial transformation to the year 2020 states the path to be followed to achieve industrialization in the year 2020. The report states in part "The informal sector is an entry point for the self-employed as a testing ground for development of low cost products, the sector is well distributed in all parts of Kenya in both urban and rural areas.

Although the informal sector has been characterized by several attributes, on compliance with the legal and administrative regulations is often regarded as its most important characteristic. Castells and Portes (1989) state that the most central feature of informal sector activities is that they are unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated. Carlo and Herman (2011) emphasize that it is noncompliance with the legal and administrative regulations rather than with social regulations that is important. The study focused on the computer services. These are predominant self-employment activities in the areas targeted in the study. There is evidence that returns to education are rewarded differently across occupations Baum and Payea (2004). The study examined returns to education on the two self-employment activities.

Statement of the Problem

Those in employment face wage differentials arising from various variables. Returns to education in the formal sector are determined by clearly set scales but in the informal sector there are earnings differentials whose variables continue to attract the attention of researchers and scholars. Studies in the formal sector show that the higher the education levels the higher earnings. However in the informal sector other variables intervene leading to earning differentials in the same sector (Yaz 2006 The sector is critical in employment creation and poverty alleviation (I.E.A Report 2010). Kisii County is heavily populated according to Kenya's latest population census. The region has no single industry to absorb many of the graduates coming out educational institutions in the region. The sector has attracted people of all levels of education and training. This study investigated the contribution of education to the returns of those in self-employment. Specifically the study examined the sector of computer services industry

Specific objectives

- (i) Determine the returns to various levels of education of the self employed in computer service industry,
- (ii) Establish the challenges facing the self-employed in computer and service industry in their work a
- (iii) Determine effectiveness of intervention measures by the Government of Kenya to support the self-employed in computer industries in their work.

Theoretical framework

The contemporary theory of human capital has its origins in the work of Schultz, (1960) and Becker (1964) and postulates that the positive correlation between education and earnings is due to productivity enhancing effect of education. Better trained workers are considered to be more skilled and productive than less trained workers justifying their higher wages. Becker (1964) presents a model where individuals choose their level of education within the context of an optimization framework. The return to an incremental year of education comprises the expected additional earnings attributable to that extra schooling less the pecuniary and non-pecuniary costs associated with the extra schooling Using US Census data, Mincer (1974) conducted one of the first empirical analyses of Becker's theory. Mincer's human capital earnings function (HCEF) incorporates post-schooling human capital accumulation through job experience. The Mincer

HCEF has provided the framework for a large number of studies on returns to education. Reviews of this literature are provided by Trostel. (2002) and Card (1999) In one often cited study using data for the United Kingdom, Harmon and Walker (1995) estimated returns to education of between 6% and 15% per year of schooling for male employees. Walker (1995) estimated returns to education of between 6% and 15% per year of schooling for male employees.

Literature Review

Returns to Various Levels Education of the Self-Employed in Computer Industry

A study carried by price water house coopers (2005) showed that a first University degree in the United States yield higher returns than lower qualification. This study pooled information from the quarterly labour force survey between 2002 and 2004. The analysis involved the calculation of the economic costs and benefits associated with education to the first degree standard. The study also analyzed other factor assumed to influence earnings such as age, gender and religion of respondents. However the study examined both those in formal and employment, the present study is narrowed to urban self-employed. Psacharopoulos (2009) on returns to investment in higher education in European countries found out that; returns varied between countries. The returns were higher in newly established countries such Czech republic, Poland, Hungary and Turkey and lowest in Scandinavian countries such as Denmark and Sweden. On average university graduates had 61% advantage over secondary school leavers. Higher education investment for individuals and society was found to be profitable. However Carlo & Herman (2011) observed that there is no productivity argument involved, education is just legitimizes means for social closure and exclusion. Similarly Bowles and Gintis (2001) viewed education as a tool determining where an employer places an employee to perform certain tasks. Patrick et al (2012) examined the effectiveness of entrepreneur training on performance of university graduates in Tunisia. The training was found to have created in the graduate's optimism for the future. The entrepreneurship training enabled the graduates create their own jobs, as well as align their skill with the needs of the market. In a country where youth unemployment is high self-employment will be productive to many university graduates without jobs. The present study seeks to determine whether those in self-employment have skills necessary for work. Boothby and Drewes (2006) examined the diploma earnings in Canada. The report findings were that the college earnings premium increased between 1980 and 2000. Ferrer and Riddell (2002) also identify a small earnings premium to non university post-secondary education (compared to those with a high school education). While college graduates enjoy a more modest earnings premium than university graduates, they still benefit from a substantial rate of return for two reasons. First, college is typically cheaper than university in Canada. Also, college programs tend to be shorter. Studies on returns to diploma education to the self-employed in Kenya have hardly been examined.

The Challenges facing the Self-Employed in the informal sector

The self-employed sector also known as the informal sector by its nature is unregulated and operates in varied circumstances.

Some of the constraints in literature are related to inability to access funds to cater for their needs (Binks, 1979), managerial and business skills deficiencies (Townroe and Mallalieu, 1990). This limitations affects the growth of the self-employed. In Kenya the self-employment sector is beset with constraints such lack of access to credit, absence of clear regulations on operation, harassment by urban centre authorities marketing and related challenges (IPAR, 2000). This factors affect the progress of the self-employed. A World Bank study of vocational education by Psacharopoulos and Loxley (1985) revealed that higher levels of general education are not necessary, but a good general education provides a good foundation for vocational education. The World Bank policy paper on vocational and technical education and training made the same recommendations (Middleton 1991). In India, many of the successful micro entrepreneurs being developed are university graduates. A study by Barasa and Kaabwe (2001) on fallacies in policy and strategies of skills training for the informal sector, noted that the informal *Jua Kali* sector is known to suffer from a negative public image due to the perception that the sector consists of people who are school dropouts with low academic qualifications and who only resort to joining the sector after failing to qualify for the formal academic or vocational route. The research found out that 77% of the trainees had qualified for admission to the next levels of formal education and had passed in all subjects including mathematics, science and languages; 62% were primary school leavers, 36% had attained secondary school education and 2% had formal college level education. Momanyi (2008) established that those who enter the self-employed required relevant skills in the areas they were engaged. Refresher courses are recommended to those in the self-employment

A study by Nyangori and Nyonje (2010) examined the influence of entrepreneur's level of education and training on the performance of micro and small enterprises. The study sampled respondents from urban centres. The study revealed that education and training influenced the success of business enterprise. Those with higher education were exhibited higher performance than those with less. From the study it was recommended to equip those with less education with skills necessary for the world of work. Becker (2004) views the informal economy as too constrained by non competitiveness, limited access to finance, cumbersome bureaucratic procedures in setting up, operating and growing a business, poor state of infrastructure and lack of effective institutional structures. The elimination of these constraints is a huge task that, calls for holistic support from institutions such as government, financial institutions, Non-Governmental Organization (NGOs), and the private sector so as to create an enabling environment for the development of the informal economy. Entrepreneurs in the informal economy must be in a position to respond quickly and efficiently to international market signals in order to take advantage of trade and investment opportunities and reap the benefits of the international trading system.

Kenya Government Intervention in the Self-Employment Sector

The Kenya government first attempts to link education to self employment was through the Kamunge report (republic of Kenya 1988). The report recommended that education and training should develop skills which promote self-reliance and self-employment. In the development plans 1989-1993, 1994-1996, 1997-2001, self-employment is credited with

employment creation (republic of Kenya, 1997, 2001 & 2002). The information of the sector was later to be highlighted by the Sessional Paper No 1 of 1986 on economic management for renewed growth and the sixth national development plan (1989-93) as a sector that was to transform Kenya's economy (Republic of Kenya 1986). The sector has grown over years employ millions of Kenyans (Republic of Kenya, 2014). Twenty years after the I. L.O report (Republic of Kenya, 1972) the Government of Kenya in her sessional paper no 2 of 1992, on small enterprise and jua kali Development in Kenya set out a comprehensive policy framework meant to enhance the following: direct assistance to individual entrepreneurs and small scale enterprises, access to credit to small scale enterprises, access to financial and management information and removal of tax, licensing and other regulations hindering small scale enterprises (Republic of Kenya, 1992). The Kenyan Government sessional paper no 2 of 1996 on industrial transformation to the year 2020 highlighted the role of informal sector in employment creation. It was noted that constraints existed that impeded the growth of sector such as: access to credit, access to land, lack of training and technical support, access to information and infrastructure. The removal of such constraints will have seen the sector grow and create employment opportunities. Through various reports development plans and sessional papers the Kenya Government had laid a lot of emphasis on the self-employment sector: The Mackay report (Republic of Kenya, 1982) had given a recommendation that the second university should produce graduates that have the potential for self-employment. The Kamunge Report (republic of Kenya, 1988) too recommended that education and training should develop skills which promote self-employment. In the development plans of 1989-1993, 1994-1996, 1997-2001 self employment sector had been credited with job creation considerably reducing unemployment (Republic of Kenya, 1997; 2001 & 2002). Sessional Papers 1992, 1996 & 1997 on industrial transformation to year 2000 recognizes the importance of self-employment and recommended a linkage between education and needs of the self employment sector (Republic of Kenya, 2002).

There have been efforts by the Kenyan government to provide shades for the various juakali artisans in the different urban centres of Kenya. However, the project has been a total failure since it is provided in piecemeal. The donor funding extended to the informal sector in Kenya has been mismanaged. The jua kali workers remain isolated and marginalized at the end while the funds benefit a few in the government. The availability of operating space for the SMEs workers especially the hawkers and street vendors in Kenya is a big problem. The hawkers have been encroaching every available space on the pavements of the urban centres where they display their wares to the population and passerby (Wanjohi, 2014).

Research Design

The study used correlation research design (Gall and Borg, 1996, Kisilu, Kombo and Tromp 2006). The design enabled an assessment of the degree of relationship between two or more variables. Correlation enabled the testing of the strength of the cause-effect relationship (K.I.M 2009). Correlation allowed the study to analyze the impact of levels of education on the returns to education across various self-employment activities. Correlation coefficient (r) was used to show the magnitude of relationship while multiple regression coefficients (R) allowed

the prediction of earnings according to various levels of education. The study assess comparative earnings of self-employment activities and levels of education.

The population of the Study

The study focused on the self-employed in key urban centres: Kisii town, Suneka, and Ogembo. The target population in these centres was estimated to be 11,240. They were identified by the type of self-employment activities they are engaged in and levels of education. The urban centres selected for the study have high population due to rural urban migration (Government of Kenya 2009)

Sample and Sampling Techniques

The sample size in this study was obtained using Fishers formulae (Mugenda & Mugenda 2003, Glenn D. Israel 1992)

$$n = \frac{Z^2 pq}{d^2}$$

$$= \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2}$$

$$= 384$$

n =desired sample size when the desired sample size is greater than 10000

Z = the standard normal deviate at the required confidence level (in our case 95%).

p = the proportion in the target population estimated to have characteristics being measured (in our case 0.5)

$q = 1 - p$.

d = the level of statistical significance set (in our case 0.05 since the confidence level is 95%).

The sample of the study

The sample of the study were 211 self-employed in the computer parts industry. The study used snowball sampling to select study sample as follows: in Kisii, Suneka and Ogembo towns. Snowball sampling involves using the first identified subject to identify others. The target were; University graduates 10 respondents, diploma holders 10 respondents, certificate/craft 10 respondents and, Juakali 10 respondents. Stratified random sampling was used to enable the selection of respondents from all urban centres for the study and the various levels of education.

Data Analysis Procedures

Data collected from the field was first coded into research questions and objectives. Qualitative data was reported verbatimly. Quantitative data was analyzed use of inferential statistics such as regression and multiple regression. The study sought to determine how various levels of education determine the returns of those in self-employment activities. The study sought to determine other variables besides levels of education that influence the returns of those in self-employment activities.

Data analysis and discussion

Returns to various levels of education of the self-employed in computer service industry

In order to determine how well the correlation model explains the relationship between education levels and average earnings, the mean and standard deviation was calculated as indicated in The study found out that; in computer service industry self-employed respondents with K.C.P.E earned an average Ksh 15,571.17, K.C.S.E earned an average 14,857.08, certificate earned 9364.81 and diploma earned an average of 9364.81 amount of money and bachelor earned 30,293.33. The Pearson's r results were: k.c.pe 0.643, k.c.s.e 0.104, certificate 0.128, diploma 0.195 and bachelors degree 0.045. The r^2 analysis was: k.c.p.e category the r^2 was 0.0413, k.c.s.e was 0.011, certificate 0.016, and diploma was 0.038 for bachelors. The adjusted R results were:kcpe 0.373,kcse 0.02,certificate 0.002, diploma0.001 and bachelors 0.075 The ANOVA indicated k.c.p.e ($F(1,15)10.572, P=0.005$), k.c.s.e was ($F(1,70)0,761, P=0.386$), certificate was ($F(1,52),0.868, P=0.356$), diploma was ($F(1,28)1.031, P=0.319$ and bachelor results were ($F(1,13)0.006, P=0.874$).

Regression Analysis of the Relationship between Education Levels and Average Earnings in the Computer service Industry

On average; respondents with KCPE, KCSE and certificate qualifications earned nearly similar amounts of money. Those with diploma, undergraduate and graduate earned more incomes with graduates earning the highest in this industry. Whereas the relationship between levels of education and average earnings was found to be significant for KCPE, it was generally weak for all the other levels of education. The Pearson's r analysis for KCPE showed a Pearson correlation coefficient of 0.617. This indicated moderate relationship between KCPE level of education and average earnings and that the data was not significant. For the case of KCSE, the Pearson correlation coefficient was 0.009. This indicated a weak relationship between K.C.S.E level of education and average earnings and the data was significant. For the case of certificate, the Pearson correlation coefficient was 0.585 with a corresponding p-value of 0.130. Excluding the graduate level of education, the rest of the independent variables accounted for 31.8% of the variation in the dependent variable with 68.2% of the variation in the average earnings remaining unexplained. Analysis for persons (r) indicated that: for K.C.P.E showed a Pearson correlation coefficient of 0.617 with corresponding p-value of 0.002. KCSE was 0.009 with a corresponding p-value of 0.935, certificate was 0.009 with a corresponding p-value of 0.925, bachelors, the Pearson correlation coefficient was -0.297 with a corresponding p-value of 0.349, masters was 0.277 with a corresponding p-value of 0.821. For the case of diploma, the Pearson correlation coefficient was 0.303. For the case of bachelors, the Pearson correlation coefficient was 0.129. The Pearson's r^2 results were: kcpe was 0.413, kcse 0.011, certificate 0.016, diploma 0.038 and degree 0.002. The r adjusted results were :kcpe 0.373. kcse 0.002, certificate 0.002, diploma 0.001 and degree 0.075. The ANOVA results were: For kcpe ($F(1,20)12.282, P=0.002$), kcse ($F(1,84)0,007, P=0.935$), certificate was ($F(1,25,) 0.428, P=0.519$), diploma was ($F(1,17)1.290, P=0.597$) and bachelors degree was ($F(1,10)0.0964, P=0.349$).

Government intervention measure for computer services

The least intervention was provision of market rated at 1.0000. That means the self-employed have to find ways of selling their products. The national and county government needs to create awareness of market opportunities for the products sold by computer service industry. The self-employed have little information of the market beyond their daily customers. The second least intervention was provision of refresher course rated at 1.0262. Respondents reported minimal government support in equipping them with skills necessary for their work. Refresher courses are important in inculcating new methods of production. Marwanga (2015) found components of skill diversity which enabled its heightened impact included learning and skill development opportunities, accumulation of skills over time, no need for basic qualifications to join the industry, numerous options in the industry to take up, and easy diversification into other skill fields. The self-employed needed refresher to upgrade their skills. The provision of market stalls was least rated third at 1.0262. An interview schedule indicated many of self-employed in computer service operated from small squeezed cubicles. The rooms were not suitable for conducting business. The premises used had little room for expansion and operation. Through interview schedules the respondents cited small space as discouraging to their customers. The government should identify possible market places where the self-employed can trade from. Building of shades and stalls should also be done. The provision of loans was rated at 1.0838. The respondents reported little government intervention to provide loans to the self-employed in the computer service industry. The county and national government should allocate soft loans facilities for the self-employed.

The provision of security was rated at 2.9372. There was significant agreement that the government provided security. An interview schedule indicated instances of break-in and stealing of merchandize. The national government should provide security to the self-employed property. The respondents rated infrastructure at 2.9476. There was agreement of evidence that government had provided infrastructure in form of road. But the respondents through interview schedules complained of lack of accessibility to their locations because of poor drainage. The provision of the very basic necessities for the entrepreneurs is lacking. The lack of piped water, sanitary and waste disposal facilities, tarmacked roads, electricity and access to public facilities such as schools are all a hindrance to the establishment and development of the self-employed. The people are poor and have no access to credit; have no bank accounts and don't get loans from banks (World Bank, 2006). The provision of electricity was rated at 2.9738. Though there was effort to provide electricity respondents through interview schedules complained of blackouts and high electricity charges.

Conclusion

Returns to various levels of education of the self-employed in computer service

The study established that

On average; respondents with KCPE, KCSE and diploma qualifications earned nearly similar amounts of money. Those

with certificate and bachelors earned lower incomes. However, masters graduates seemed to earn more income than the rest in this industry. Whereas the relationship between levels of education and average earnings was found to be significant for KCPE, it was generally weak for all the other levels of education. The average earnings had a positive relationship with the independent variables of KCPE, KCSE diploma and bachelors level of education while this relationship was negative for certificate level of education. The negative relationship between average earnings and the certificate level of education was statistically insignificant. Certificate level of education had the least significant effect on average earnings.

Intervention measures in computer industry

The least intervention was provision of market rated at 1.0000. The second least intervention was provision of refresher course rated at 1.0262. The provision of market stalls was least rated third at 1.0262. The provision of loans was rated at 1.0838. The provision of security was rated at 2.9372. The respondents rated infrastructure at 2.9476. The provision of electricity was rated at 2.9738. The self-employed should have the relevant information on the markets and their operation. Availability of information on foreign markets should be made available to the self-employed. A level playing field to all entrepreneurs should be maintained irrespective of the level of education or the stage of operation of the self-employed. The study calculated r^2 the returns to education. The results were: K.C.P.E category the r^2 was 0.0617, K.C.S.E was 0.009, certificate 0.009, diploma was -0.130, bachelors -0.297 and masters degree 0.0277. In the spare parts the K.C.P.E respondents had the most significant results, with diploma and bachelors degree recording negative return while K.C.S.E, diploma and masters degree respondents had marginal results indicating the unpredictable returns to education in the self-employment sector.

Intervention measures in spare parts industry

The respondents rated provision of loans at 1.000 as a challenge. Lack of market stall was the second highest challenge rated at 1.0651. Provision of market for the spare part industry was rated at 1.1006. On provision of courses the respondents rated government intervention at 1.01893. Provision of security was rated at 1.1893. The respondents responses for government intervention in reduced taxes was rated at 1.9763. The provision of electricity was rated at 3.7515. The government should devise ways of providing credit to the self-employed to start operating. The various banks should lower the interest rates on the loans as well as remove the requirements for securing a loan to levels which the jua kali artisans and hawkers can access funds. The repayment of the loans can be done in piece meal where the entrepreneur pays a small amount each month at very low interest rates. Fund schemes for the small scale artisans and business entrepreneurs should be established to avail funds to them especially the youth who find themselves unemployed after many years in school. The government should also allocate in the annual budget finances for the jua kali sector. These funds should be used wisely and any misappropriations be punished severely. The red tape policies should be removed to enable the informal sector entrepreneurs access the services and finances needed for the establishment and running of the self-employed. The government needs to change its policy on the informal sector. Harassment of the hawkers, street vendors

and denial of operating licences should be dealt away with. The government harassment leads to market failure for the self-employed

Conclusion

Based on the findings of the study, the following conclusions were made: There were earnings differential among self-employed in computer industry; even in the same self-employed activities those with same level of education earned different levels of income, the higher the education level, the higher the returns, the self-employed in computer had no financial support from the government and electricity charges were high and there were regular blackouts.

Recommendations

From the findings and conclusion the study made the following recommendations

- i. Tailor education to meet the needs of the self-employed to enhance their earnings
- ii. The government and financial institution increase loans to those in self-employment sector to enable them increase level of operations.
- iii. Those in self-employment needed refresher courses to equip them with skills necessary for self-employment.
- iv. The provision of electricity is critical in the computer and spare industry
- v. Reduction of bank interest rate and electricity charges

REFERENCES

- Amenya, G. N. 2007. The informal sector in Kenya, presentation at Youth Micro Finance Forum Held at University of Nairobi, Nairobi.
- Baum, S, & Payea, K. 2004. Education Pays: The Benefit of Higher Education for Individual and Society, Washington D.C. College Board.
- Becker, G. S. 1962. Investment in Human capital: A theoretical Analysis with special, *Journal of Political Economy* volume ii, University of Chicago.
- Bowles, S, Gintis, H.S & Osborn.M. 2001. Incentive – enhancing Preference: Personality, Behaviour and Earnings. *American Economic Association Papers and Proceedings*, 91: 155-158
- Canagarajah, S and Portner, C 2003. Evolution of Poverty and Welfare in Ghana in 1990s. Achievement and Challenge. Africa region Working Paper series no 61. Washinton DC . The world Bank
- Denison, F.E. 1962. Measuring the Contribution of Education and Residual to Economic Growth: Readings in economics of education, Paris: U.N.E.S.C.O.
- Donald, L.S. 2010. *International business and Economic Research Journal*. Volume 9, N0 5
- Gary, N.M. 2008. The occupation of Earnings of young Austrarians. The role of Education and Training. The Austrarian Council for Education and Research: Australian Council of Education Research.
- Gavan, C. & Pietro, P 2011. Returns to Higher Education qualification. Report Prepared by London Economics on Behalf of the Department for Business, Innovation and Skills.
- Hider, A. 2007. Wage Differentials, Rate of Return to Education and Occupational Wage Share in the Labour

- Market of Pakistan. Islamabad: Pakistan institute of Development economics.
- ILO 1972. Employment, Incomes and Equality: *A Strategy for Increasing Productive Employment in Kenya*. Geneva, ILO.
- Kinyua.N.A. 2014. Factors Affecting the Performance of Small Scale and Medium Enterprises in the Jua Kali Sector in Nakuru Town, Kenya. *Journal of Business and Management (IOSR-JBM)*, Volume 16.Issue 1(January 2014), p 80-93
- Marwanga. J.O, 2015. International Journal of Economics, Commerce and Management United Kingdom, Vol. III, Issue 6, June 2015 Licensed under Creative Commons Page853http://ijecm.co.uk/ISSN 2348 0386
- Mincer, J 1962. "On the job training" Costs; returns and some implication 'in : UNESCO (1971). Readings in Economics of Education. Paris: UNESCO
- Mincer, J. 1974. Schooling, Experience and earnings. NewYork: National Bureau of Economic Research.
- Momanyi, C. 2008. Benefits of Non Formal Education to jua Kali Artisan.a study of the informal Sector Business Institute (I.S.B.I). Nairobi.
- Mugenda, O. & Mugenda, A. 2003. Research Methods : Reseach Methods. Qualitative and Quantitative Methods. Nairobi:Acts Press
- Namirembe., S. K. 2014. Private Returns to Education for the Wage-employees and Self-employed in Uganda. Masters Thesis. Makerere University
- Nandan, H. 2011. Fundamentals of Entrepreneurship. Second Edition. New Delhi: PHI Learning Private Limited.
- Nyakundi, E. 2008. The influence of formal Education on the earnings of the Self-employed in Kisii municipality: Published M.ed, Maseno University.
- OECD 2001b. Education Policy Analysis 2001 (Paris, OECD
- Oreopoulos, P. & Salvanes, K.G. 2011. Priceless: The No pecuniary Benefits of Schooling. *Journal of Economic Perspectives*, 25 (1), 159–84.
- Ouma.F.W. 2010. Regularizing the Informal Sector. Jua Kali Activities in Nairobi for sustainable Development.46 ISOCARP Congress
- Patrick, P., Stefanie, B & Mahdi, B 2012. Entrepreneurship Training and Self-Employment among University graduates; Evidence from randomized trial in Tunisia: World Bank
- Patrinos, H.A., Ridao, C. & Sakellariou, C. 2006. Heterogeneity in Ability and Returns to Education : Mult-Country evidence From Latin America and East Asia. World Bank Research paper. Washington DC:World Bank
- Price waterhouse Coopers, L. L. P. 2005. The Economic Benefit of Higher Education Qualification: A report produced For royal Society of Chemistry and the Institute of Physics. London :Price water House coopers.
- Psacharopoulos, G. 2009. Returns to investment in higher education. A European survey. A contribution to higher education funding reform project C.H.E.P.S-led consortium for European commission.
- Republic of Kenya 2005. Sessional Paper No. 2 of 2005 on small Enterprise and Jua Kali Development in Kenya, Nairobi:Government Printer
- Republic of Kenya, 2005. A policy Framework for Education, Training and Research : Meeting the challenges of Education, Training, and Research in Kenya in the 21st century. Sessional paper no 1 Of 2005, Nairobi: Government printer
- Rugar, O, T. 2010. Private Rate of Return To University Schooling Among Lecturers in Public Universities in Kenya. Unpublished PhD Theses, Maseno University Kenya.
- Samir, A. & Barry, R. 2013. Education, Employment and Earnings of Secondary School-school leavers in Tanzania. Evidence from atracer Study PRUS Working Paper no
- Shultz, T.P. 2004. Evidence of Return to schooling in Africa from Household Survey: Monitoring and Restructuring the Market for Education. *Journal of African Economies*, 13(2) pp 95-148.
- Shultz, W.T. 1961. "Investment in Man: An Economist's View "UNESCO.
- Wanjohi, M.A. 2010. Challenges Facing S.M.E in Kenya and Efforts in Progress. K.E.N.P.RO. Papers Portal.
- World Bank. 2012. Improving Skills Development in the Informal Sector: Strategies for *Sub-Saharan Africa*. Washington, D.C.: Human Development Department, Social Protection Unit.
